

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: David Metz <metzd@cfw.com>
Subject: 6DJ8's & can caps
Message-ID: <9603082305.AA18058@milo.cfw.com>

At the risk of making a commercial endorsement, the recent posts of the 6DJ8's and 6ES8's comparisons made me notice something today. The winter flyer of Antique Electronic Supply has 6DJ8's (JAN) for \$3 ea and multisection electrolytics 80/30/40/40 450/450/350/150 for \$3 ea also. I recently ordered a few 'lytics for test as I couldn't believe the price. I put them in across a power supply and the leakage was acceptable. I then "test leaded" them into a circuit and they sounded great. The reason for this post is that this flyer expires March 15. FYI---

73's dave

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: jharper@bs2000.com (Jack Harper)
Subject: Address for the \$12?
Message-ID: <v01510105ad6553598ffe@[204.131.233.2]>

Sorry about this waste of bandwidth...

I know that it has appeared before, but I do not know the address to where I should send the \$12.00...

Tnx 73's Jack KC0LR

Jack Harper Bank Systems 2000, Inc.
e-mail: jharper@bs2000.com 350 Indiana Street, Suite 350
voice: 303-277-1892 fax: 303-277-1785 Golden, Colorado 80401 USA

"21st Century Banking Applications"
Private Label Optical Bank Card Systems
Visit our Web Page: <http://www.bs2000.com/talos>

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Bill Strangfeld <bstrang@iac.net>
Subject: alignment question
Message-ID: <Pine.SUN.3.91.960308101548.5844B-1000000@little-miami.iac.net>

The May 1959 issue of CQ (page 63) describes an alignment technique claiming to produce a better bandpass shape (flatter top, narrower skirts) than conventional alignment.

The article explains it as follows:

"There is a procedure for if alignment that produces a little better bandpass characteristic....

Overcoupled if transformers rely upon reflected impedances to develop the bandpass. These reflected impedances can cause detuning of the two tuned circuits.... To obtain the desired charactic from the same transformer, it will be necessary to tune the primary and secondary independent of each other.

This can be accomplished by connecting a 1500 ohm resistor across the secondary of the transformer and tuning the primary to maximum output and then when the maximum is obtained, reversing this procedure. With the resistor across the primary, tune the secondary for maximum.

The result of this is to load down the transformer so only one tuned circuit is effectively in the circuit. The results will amaze you, especially in the quality of the audio now available."

Anyone have experience with this? Is it worthwhile? Any side effects?

73

Bill Strangfeld

Looking for Coil E for HRO-60

bstrang@iac.net

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996

From: Duncan Cadd <dcadd@luc.ac.be>

Subject: RE: alignment question

Message-ID: <9603081559.AA32007@alpha.luc.ac.be>

Greetings, Bill, from a bright and sunny Diepenbeek in N.E. Belgium!

> This can be accomplished by connecting a 1500 ohm resistor across the
> secondary of the transformer and tuning the primary to maximum output and
> then when the maximum is obtained, reversing this procedure.
> Anyone have experience with this?
> Bill Strangfeld

No, but if it is of any comfort, my old 1947 Philips serviceman's manual also recommends this. Sounds perfectly reasonable to me, all you are doing is temporarily to remove the detuning effect of one circuit on the other. Once you've made the adjustments, you remove the resistor, it doesn't stay in circuit so there should be no after effects. The problem with trying to do the adjustment without this dodge is that tweaking one tuning slug affects the resonance of the other coil/cap combination as well, so you are never playing with only one variable and it can get confusing! I'd go ahead and do it, that old Philips manual never let me down yet.

73, and good weekend,

Duncan ON9CHU / G0UTY G-QRP 8117 dcadd@luc.ac.be

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Michael.J.Knudsen@att.com
Subject: Re: alignment question
Message-ID: <9603081638.AA29223@bock.ih.att.com>

I don't know, but this loading down with a temporary resistor was the standard procedure for aligning FM radios in the early days before sweep gens were common. Zenith specifies this technique in its service bulletins of ca 1947.

A trick I thought of, but haven't tried, is to align with AM signal modulated with a higher than usual audio frequency, say 2 or 3 KC, near the top of the desired bandpass, and tune for maximum audio volume (as opposed to maximum carrier on the S meter). Anyone tried this? 73, mike k aa9rg

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Re: alignment question
Message-ID: <9603081726.AA100205@csemail.cropsci.ncsu.edu>

> A trick I thought of, but haven't tried, is to align with AM signal
> modulated with a higher than usual audio frequency,
> say 2 or 3 KC, near the top of the desired bandpass,
> and tune for maximum audio volume (as opposed to maximum carrier
> on the S meter). Anyone tried this? 73, mike k aa9rg

I have been aligning IFs and xtal filters this way since I first grappled

an alignment tool, and was too poor to have the required scope and generator and thousand other accessories. That is called tuning by ear, and it works quite well when trying to obtain the narrowest bandwidth or sharpest tuning on an IF strip. I prefer to align this way if I can hear the transformers tune. If I can't hear the transformers tune, by just listening to the audio, then I hook an AC vtvm on the audio output and tune for max (my hearing is slightly falling off with age....(:+{f{.....

You don't even need an alignment signal. You align on the noise. Turn the bfo on or advance the regeneration to just into oscillation. Then, adjust coils or tuning starting with the closest stage to the audio and work back to the front end. If there is a xtal or mechanical filter, then make sure it is in, and use it as the passband center QRG. It has a nice peak rush and bandwidth valley as things get into proper alignment. Using this technique, alignment of a xtal filter where the xtal has drifted a kc or two off, is trivial.

73/ZUT DE NA4G/Bob

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Kim Herron <kherron@voyager.net>
Subject: Re: alignment question
Message-ID: <199603081901.0AA29989@vixa.voyager.net>

Hi Gang,

Thought I contribute a little input on this question. The resistor that is attached to the IF secondary [or primary] winding is commonly known as a swamping resistor. Sometimes it's used in series with a capacitor, usually .001 uF. The idea is to get the proper bandpass through the circuit. Drake uses this in it's transmitter and transceiver alignment procedure as does Collins. It does accomplish it purpose, though I will confess to doing alignments without them and having no noticable difference in the acheived results. The thing that the resistor/cap combination will do is reduce the Q of the circuit. That has always seemed self-defeating to me and yet there are circuits that can be peaked to the point of oscillation on strong signals, which is why the manufacturers used the "gimmick" or "circuit load".

It may be possible to get the desired bandwidth [or bandpass] through the IF by using the modulated RF signal and tuning for the strongest AF output. However it's just as likely that the actual center frequency from one IF transformer to the next will vary enough to give some rather strange effects as one tunes across the signal with the receiver. That effect can be seen sometimes in wide bandpass receivers with S-meters. The signal will peak on the S-meter and drop back and peak again before it goes back to the background noise level. What is being seen is the effect of the IF bandpass

and Its peaks and valleys on the signal as it goes through the IF strip. The wider the bandpass, the more pronounced the effect. This tends to be true of High-Q designed IF sections that are either out of alignment or have been retuned for the wider bandwidth.

However, if your ear is happy.....SO WHAT!

KIM

kherron@voyager.net

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: "Randy Zelick" <RANDY@sbii.sb2.pdx.edu>
Subject: Re: AN/URM-25D stability data?
Message-ID: <2726FD303F6@sbii.sb2.pdx.edu>

Dear Ray,

Have you ever considered a chart recorder?

=Randy=
Randy Zelick
Dept. Biology
Portland State University
P.O. Box 751
Portland, OR 97207
503-725-3086 (voice), 503-725-3864 (fax)

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: DUBE2@delphi.com
Subject: Re: ART-13 vs ART-13B
Message-ID: <01I22QR32QLU9BVYJN@delphi.com>

Andy asked:

>What's the difference between an ART-13 and the -B model?

I don't know because the B I have is the only one I've ever been real close to. I do know that it has a CDA-T Crystal Oscillator Unit whose panel is in the upper center portion of the front panel. Inside it has "Collins" stamped here and there, but nothing on the outside to indicate the manufacturer. I assume that this was a modification of the original model, because there's a small aluminum plate screwed to the side that says "T-412/ART-13B".

73,
Dube
dube2@delphi.com

AB5AP

The wear on a hypothesis is proportional to the distance of the extrapolation from the experimental results - Eli Brookner

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: Re:Assorted Sig Gen Posts.
Message-ID: <01BB0CF7.86815960@juneau_20.dialups.ptialaska.net>

From: Jeff Kilgore[SMTP:kilgore@dev.tivoli.com]
Sent: Friday, March 08, 1996 6:41 AM
Subject: need manual for EICO 320 signal generator, etc.

Does anyone have a manual (or a photocopy thereof) for an EICO model 320 signal generator? Or if not a manual, perhaps the schematic?

Also, does anyone have any recommendations for a good, reasonably priced (under \$500) frequency counter, preferably one with coverage from audio up to 1.3 GHz?

Thanks,
Jeff Kilgore, KC1MK

Jeff-

Is the Eico 320 the sweep generator with the loudspeaker cone 'wobulator'?

If so, I have send your mail address.

Freq. counters-

Leader makes o.k. cheapie. I prefer to use an R390 or a ricebox radio (Sangean, Sony Kenwood R1000, Yaesu, whatever. You get digital accuracy and extreme sensitivity(don't load the gear under = test/alignment)

Freq counter is 'least used' piece of gear here. Get a Tek scope and an = R390 or (in)comparable BA clockwork digital. =20

Re; H-P 608 cf. URM25*

Actually the H-P 606 is more comparable (align/cal of HF radios)

Both of these cover from LF thru upper HF so are good for I.F. and RF alignment.

H-P 606 are going for \$75-\$125. Very solid, stable, like a BMW.

URM25 " " \$0- \$45 Very heavy,.....like a '72 =

Caprice Station Wagon Drifts all over the road, but it will get you = there and is far more fun...Good QRP rig (AM and/or FM), Pirate AM Neighborhood (Large Metro Neighborhood) Broadcaster for the kids Get one... Make sure it has the attenuator cords.=20 Mike Murphy Salvage in El Segundo was selling nice ones in ER ad at \$45. Mine had all accessories But wait there's more- Sell the Nordicttrak...Schlepping the 25D around is all the exercise you'll need. The H-P 608 covers VHF-UHF 10mc to 410mc. You will need a permission slip from your Chiropractor to purchase one. Jim Dillon WL7CMQ beadgal@ptialaska.net URM25D is all plugged in...should be stabilized by the time I find a National NC100X or other Green Eye Tuning Radio to align.

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: AVR-112, AVR-20 Radios
Message-ID: <Pine.OSF.3.91.960308114956.574A-1000000@abernathy.tenet.edu>

Ian Abbot asked about the use of these radios:

They were installed in liaison aircraft of the World War II period. In the L-4 (military Piper Cub), for example, the AVT-112 transmitter was mounted on the observer's table and the AVR-20 receiver was mounted at the left wing root just above and behind the pilot's shoulder.

They were used with an AVA-120 antenna reel which was also mounted at the left wing root but behind the receiver. The reel was hand operated. The antenna wire extended out through the back of the cockpit and went through a guide at the top of the vertical stabilizer. There was a small, red metal device shaped much like an open-ended wind sock on the end of the wire that provided drag to extend the antenna behind the aircraft.

Lenox Carruth
klccarru@tenet.com

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: jmillier@teleteam.com (Jay H. Miller)
Subject: Bird in the Hand
Message-ID: <v01510100ad65d5087239@[205.198.110.13]>

Just picked up a very unique Bird wattmeter and wanted to share it with the group.

I appears to be either a production model or a military special item. Besides not being in a familiar Bird case, the unit bears no manufacturer markings other than what is on the meter face. What is unusual is that it has a toggle switch on the front labeled FWD and REF which switches one of TWO slugs in sockets either in the front or the back of the case. One slug is for measuring forward and the other for reflected... without switching the little arrow on the slugs.

The interesting thing about this arrangement is you can read forward power on a high scale (slug) and.. hopefully... reflected power on a low scale (slug) with the flick of the switch.

Now to find some slugs. Any Type H spares out there? 100H, 500H, 1000H, 2500H.

```
***** ##### *****
Jay H. Miller, KK5IM           Dallas, Texas
The Pocket Guide to Collins Amateur Radio Equipment
jmilller@teleteam.com
***** ##### *****
```

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: pbock@melpar.esys.com (Paul H. Bock)
Subject: Re: Birds, bugs, keys, and plain ol' wire
Message-ID: <9603081905.AA27004@syseng1.se.melpar.esys.com>

Jay said

>Just picked up a very unique Bird wattmeter and wanted to share it with the group.

Which brings up a question: When did the first Bird 43-style wattmeter appear? It would seem to me that, except for copper wire (in general use since - 1700s? Earlier?), the ubiquitous "straight" key (which has been around since the last century), and the Vibroplex "bug" (the basic "Original" appeared in 1904 and is little changed today), nothing else we use in ham radio today has changed as little or remains available as an off-the-shelf item except the Bird Wattmeter.

Not many things have stood the test of time as well, that's for sure. XYL gave me a new 'un this past Christmas.....still built like a tank, still *THE* wattmeter, IMHO.

73,

Paul, K4MSG

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Steve Rodowicz <srodowic@ix.netcom.com>
Subject: CG75L Lightning Arrestor (Was: Re: Help w/ Component Spec.)
Message-ID: <199603081931.LAA20386@ix2.ix.netcom.com>

At 03:30 AM 2/20/96 EST, Steve Sacco KC2X wrote:

>...I tripped across an item labeled: "Gas Discharge Tubes".
>
>They are about the size of two aspirin tablets stacked on top of each other, with axial leads. They are >labeled only with the part number: "CG75L 8148". There's no manufacturer name or logo.....
>
>Steve KC2X
>ssacco@mcimail.com
>Narcoosee, Florida

You may have hit the jackpot, the devices are designed for lightning protection. Not sure of specific application, perhaps telephone lines?

Anyway, Manufactured by CP Clare Corp, 601B Campus Drive, Arlington Heights IL (708) 797-7000.

Also by Chicago Miniature Lamp, 1080 Johnson Drive, Buffalo Grove IL (708) 459-3400.

Both companies use the same partnumber "CG75L", the "8148" is probably the date code indicating manufactured in 48th week of 1981.

73, Steve - N1SR / VE1EES

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: arc5@ix.netcom.com (David Stinson)
Subject: Re: Cure for Yellowed Dials??
Message-ID: <199603081253.EAA25630@ix5.ix.netcom.com>

>... badly yellowed dials. Can these yellowed dials be
>scrubbed clean and white without removing the markers?

I advise extreme caution. The aging process may make the lettering very fragile.
However, here's another perspective I got from a

fellow who rebuilds classic broadcast receivers:

leave them yellow!

You see, people expect old radios to have yellowed dials. If you clean them white, it looks "fake," like a reproduction. Have you ever seen an old man who's dyed his hair jet black? Looks pretty silly, doesn't it? People get the same perception when they see something "old" with sparkling-new, white dials. It no longer has the romantic "flavor" of age if you remove the visual clues. Unless the dials are warped, unreadable or crumbling away, I suggest you leave the old fellow with his touch of "grey" (yellow). Makes him look distinguished.

73 DE Dave Stinson AB5S/7
arc5@ix.netcom.com

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: billo@nti.net (Bill Wilson)
Subject: DX-100B-Rebuilding
Message-ID: <19960308132716975.AAA323@LOCALNAME>

As stated in a previous post I said I got a DX-100B. I don't usually buy rigs that look like this one does (did). The preacher said the radio was given to him by a guy who was taking it to the landfill. It had been sitting in a barn since 1975 and was subject to moisture. The door on the cabinet has a hole from the rust and the water over the years dripped onto the chassis and affected the aluminum chassis plate and metal parts. Most would "just say no" to this radio but I thought it would be a fun project to totally rebuild the entire set and get it back on the air.

So now I am at the halfway part. Wholesale replacement of certain sections of parts and hardware due to the rust and corrosion from the aluminum (white-ish layers of stuff between the components and the chassis). All of the recent threads about soldering are interesting considering this radio. Most of the joints have softened with age and you can "pull" the wire out of the joint. The silver micas have gone bad physically- some of the leads you can pull out of the cap. I am recapping almost the entire radio. Sanding, scraping and wirebrushing the rust away is a feat no dishwasher could handle.

If anyone has any tips on this project or usefull mods (while the radio is still in a million pieces) let me know. I hope to have this rig on the air on 3885 on sunday afternoons soon. If anyone does front panel refinishing on the DX-100B let me know too. (tried the guy in texas who advertised this service in current publications "so sorry, we just finished

the run, try back in a few years!)

Looking for a door to the Heathkit cabinet, have tubes to trade.

Thanks,

Bill
AC4LC

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Psgodwin@aol.com
Subject: Re: Eddystone and Geloso
Message-ID: <960308091340_344904116@mail02.mail.aol.com>

As a matter of interest the AM transmitter made & sold by KW Electronics (Vanguard) used the Geloso VFO. Many homebrewers used it too.

I remember reading the Sommerkamp ads and thinking they were German or perhaps Swiss. However visiting the next RSGB show & lifting the lid showed the truth "made in Japan". Not long after that Lowe Electronics cut a deal directly with Yaesu and began importing the same rigs under the Yaesu badge and SIGNIFICANTLY cheaper.

Regarding Eddystone, I never could afford one then; would like to get hold of a 888A for old times' sake. 73 Paul KF5PE (ex G3RRF)

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: "Terry O'Laughlin, RM:7135, #:6-6667" <OLAUGHLIN@vilas.uwex.edu>
Subject: Re: Eddystone receivers
Message-ID: <MAILQUEUE-101.960308132202.544@vilas.uwex.edu>

> on. I'm searching for the schematics: any UK friend may help me?

I have an Eddystone S-680X. I wrote to Eddystone and they sent me a service manual free of charge!

The 680 is a very nice receiver. The dial mechanism is incredibly smooth. The construction is excellent, with a cast aluminum mainframe for rigidity. It seems to be the British counterpart to the SP-600. It looks every bit as sexy as the SP-600 yet it is much smaller and lighter. It is more stable, sensitive and selective than the SP-600. And, best of all, it has all American style tubes. I sold my SP-600 after I found the Eddystone.

73 Terry O' WB9GVB

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: don merz <71333.144@compuserve.com>
Subject: Ford's Phone #?
Message-ID: <960308174122_71333.144_DHB80-5@CompuServe.COM>

Is there a phone number for Ford Surplus?

Thanks.
Don, N3RHT
71333.144@compuserve.com

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: dma@IslandNet.com (Jan Skirrow)
Subject: Re: Ford's Phone #?
Message-ID: <m0tv9U9-000F1DC@island.amtsgi.bc.ca>

>Is there a phone number for Ford Surplus?
>
>Thanks.
>Don, N3RHT
>71333.144@compuserve.com

W.J. Ford Surplus Enterprises
P.O. Box 606, Smith's Falls, Ont. K7A 4T6
phone: (613)283-5195
fax: (613)283-0637
email: testequi@magi.com

check out his home page at <http://infoweb.magi.com/~testequi/>

Jan Skirrow, VE7DJX
dma@islandnet.com

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: DUBE2@delphi.com
Subject: Re: Free vs Fee
Message-ID: <01I22QVA456G9BVYJN@delphi.com>

Geez! Is this going to be like code vs no-code, and keep popping up over

and over?? Let's all agree to ignore any further posts in this regard.
I'll make this my last time to address the issue.

73,
Dube AB5AP
dube2@delphi.com

The wear on a hypothesis is proportional to the distance of the
extrapolation from the experimental results - Eli Brookner

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: FW: HRO to HRO coils
Message-ID: <01BB0CBE.515BA260@juneau_26.dialups.ptialaska.net>

From: Jim Dillon[SMTP:beadgal@ptialaska.net]
Sent: Thursday, March 07, 1996 7:56 AM
Subject: RE: HRO to HRO coils

The coils at Ford Surplus are FB-7 coils ABCD, not HRO. RAS coils will
work in HRO up to -5, but you will need to retune osc and mixer for the
i.f. difference. image rejection really suffers ,but o.k. for Broadcast band
(Eand F)purposes.
Be careful trying to put -5 and earlier coilsets into -6 and later (-50,etc.).
There is difference in height of the steatite/whatever supports for the
contacts. Details are in OTB article a few years back, let me know
if you ned details on washer replacement, but for now don't push in any
coil set that balks when reaching the contacts.. Keep those PWs twirling!
I saw some G and H coils for sale recently...will try to find where.
I'm looking for E and F, also coils/coil forms for 1-10 National or coil winding
info for same. Have 1-10 for sale also.
Jim Dillon WL7CMQ beadgal@ptialaska.net
still seeking NC-100X, other Green Eyed Thirtiessomething Ladies

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: GE Memories
Message-ID: <Pine.ULT.3.91.960308082549.1789A-1000000@admin.aurora.edu>

On Thu, 7 Mar 1996, Nickels, Bob wrote:

> I owned the "big brother", the GE model E-155 all-band radio for many years.

> My dad and I bought it at a household auction in the late '60s for \$2.00 if
> I remember correctly.....
> When I came back upstairs - the whole house was filled with
> smoke! The big GE was sitting in the corner, flaming away!

This type of thing has probably happened to many of us. The lesson to be learned here is no matter how much of a purist one might be with a piece of gear, there is NO EXCUSE for not having it fused. Very few "home entertainment" devices are fused - and how about all those lovely devices we have with those wall transformers (cordless phones, answering machines, etc)?

I hope you find a suitable replacement chassis. Our family had a big G.E. also (can't remember the model) but I hope I find another like it some day.

E-mail broehrig@admin.aurora.edu

73 de Bob, K9EUI

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996

From: dma@IslandNet.com (Jan Skirrow)

Subject: Re: GE Memories

Message-ID: <m0tv7Ac-000FhmC@island.amtsi.bc.ca>

>I owned the "big brother", the GE model E-155 all-band radio for many years.
> My dad and I bought it at a household auction in the late '60s for \$2.00 if
>I remember correctly. With a pair of 6L6's and a separate power supply just
>for them, the audio was terrific.

I have a GE H-51 that looks like an earlier version of the E-155. The circuits are similar, except that the E-155 is a more sophisticated design and uses more modern tubes. I'd love to know what the colorama tuning was about! The H-51 is BC only, no colorama, but has two huge chassis - one the radio and the other the power supply and audio power amp. It runs a pair of 45s for output into an enormous speaker. A "unique" feature is that the power supply caps are potted into the choke - and maybe one is in with the power transformer. I understand that even though GE made radios from 1919, they were marketed through RCA until 1930. The H-51 was built the first year GE sold them under their own name. Mine had the original price tag inside, and it cost \$295 in 1930 - a princely sum, but on a per pound basis, cheap like borscht.

>When I came back upstairs - the whole house was filled with
>smoke! The big GE was sitting in the corner, flaming away! Evidently
something
>under the chassis got really hot because the fire was confined to the shelf
>the chassis sets on.

The H-51 has a large wirewound resistor that sits quite close to the cabinet

side of the chassis, and it gets very hot. When I first pulled the chassis, I noticed an asbestos sheet stapled to the cabinet underneath this baby. While tempted to dispose of the asbestos, I decided to leave it untouched. It's kept this set from burning up for almost 70 years, so why mess with perfection? OTOH, should something catch alight on that PS/amplifier chassis, there must be ten pounds of tar potting the numerous transformers/chokes. Make a pretty good (smoked) weenie roast!

Seriously, though, I've noticed in a number of real old boatanchors (including lots of communications gear) the use of asbestos to keep something from burning something else up. Given the voltage/currents typically found in these old beasts, and the use of large wattage resistors, I think extreme caution is needed if these heat shields are removed. Maybe someone has a good suggestion about a safe substitute?

Jan Skirrow, VE7DJX
dma@islandnet.com

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: "SROYS" <SROYS@radiology.ab.umd.edu>
Subject: GR650 question
Message-ID: <29FF0271E51@radiology.ab.umd.edu>

After cleaning up my GR650 impedance bridge contacts a little bit with denatured alcohol (btw - I'm going to get some De-Oxit and do it right so thanks to all who responded), I noticed that my meter tends to bounce around when I'm measuring small inductors and that the 1kHz vibrator sometimes doesn't start oscillating properly. The manual says to adjust the vibrator only if there is really a problem, but I noticed that the set screw that holds the adjustment wheel in place was loose, so I have no idea if it's even set close to the proper position to begin with. Since I imagine that sending it back to the factory for adjustment is out of the question, and the manual doesn't say much else that applies, does anyone know how to clean and/or adjust the vibrator mechanism to get this working properly?

Thanks again.

Steven Roys (sroys@radiology.ab.umd.edu)

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: GR650 question
Message-ID: <199603081825.MAA08420@zoom.bga.com>

As SROYS said

>

> After cleaning up my GR650 impedance bridge contacts a little bit with
> denatured alcohol (btw - I'm going to get some De-Oxit and do it right so
> thanks to all who responded), I noticed that my meter tends to bounce
> around when I'm measuring small inductors and that the 1kHz vibrator
> sometimes doesn't start oscillating properly.

>

On cleaning up the GR650, I would use Deoxit D-5, let it sit for a day,
then wash any excess off with alcohol. The stuff leaves a conductive
residue which generally presents no problem, but with laboratory DC
standards stuff, you'll want to finish off with a Q-tip and some
alcohol.

The "hummer" adjustment is simple: just put some volts on it and
adjust the screw to midrange of "good humming." A scope on it can
help. These hummers have a limited life, and I'd suggest using
something like an HP200 family oscillator to drive the bridge for AC
measurements.

--

Hank van Cleef vancleef@bga.com vancleef@tmn.com

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: "Mike O'Brien" <mobrien@lib.drury.edu>
Subject: RE: How good is the NC-400?
Message-ID: <9603081507.AA28849@lib.drury.edu>

RE: Michael J. Knudsen's inquiry about the comparative performance and worth
of the National NC-400 receiver:

It's a solid general-coverage rig, a bit more user-friendly than the
SP-600 for those of us raised on Hallicrafters, a bit more mechanically and
even electrically stable than the HQ-180, but not quite as selective as a
properly equipped 51J-4 (unless you have the super-scarce National accessory
box that allowed outboarding of mechanical filters).

The main problem is finding one of the durned things. They were
terribly pricey when new (\$800+, if I recall correctly). I've been told that
the bulk of production went to the FBI, which at the time (late 1950s-early
'60s) had a very active HF net. The NC-400 lent itself to that application
because it has crystal-controlled-frequency capability. Unfortunately, the

FBI rack-mounted the radios and apparently tossed the cabinets. So an NC-400 in a factory cabinet is an even rarer find.

As for the likely price, it'll bring whatever the owner can find someone willing to pay. I've noticed that a W6OU has been advertising for several months in the Yellow Sheets and elsewhere, seeking an NC-400. He may be able to give you an idea of what today's market will bear -- or what he'd be willing to pay.

Happy hunting....

Mike O'Brien (mobrien@lib.drury.edu)

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: HRO coils
Message-ID: <01BB0CC8.F10BDE60@juneau_26.dialups.ptialaska.net>

Hi Andy et al-

The RAS-5 system included the CNA-10037 rack which was a six pack, but following 7 coils came with the set:

CNA 47156190-450
CNA 47157450-900
CNA 47158.9-2mc.
CNA 471592-4 mc.
CNA47160 4-7 mc.
CNA47161 7-14mc
CNA47162 14-30

These are HRO-jr 175kc i.f. Coils are numbered 1-7 7 being 14-30mc.

Jim Dillon WL7CMQ beadgal@ptialaska.net
Seeking National NC-100X and other Thirtiessomething Green-Eyed Ladies
Also HRO E and F coils

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Chuck Penson <penon@sci.mus.mn.us>
Subject: HV caps needed
Message-ID: <314057D2.3191@sci.mus.mn.us>

I need some high voltage capacitors:

.05 uf -- 5000 VDC
.02 ud -- 3000 VCD
.01 uf -- 4000 VDC

These are all tubular types with axial leads. I don't think the capacitance is as important as the working voltage. I could even use series combinations to come up with the right values.

Check your junk boxes.

Thanks!

--

Chuck Penson
Education Division
Science Museum of Minnesota

penson@sci.mus.mn.us
612.221.4510 voice
612.224.5092 fax
<http://comped.sci.mus.mn.us>

Standard Disclaimer: The opinions expressed are etc. etc. ...

"Nothing is too wonderful to be true" -- Michael Faraday

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Andy Wallace <wallace@mc.com>
Subject: John Chenoweth W8CAE
Message-ID: <9603081729.AA04522@taku>

I was tuning around bedtime Wednesday night and happened to hear W8CAE in the mess on 3894.5 LSB. He sounded pretty good ... and for the record, was not adding to the shenanigans.

For info, John was one of the original people with Bob Drake at R. L. Drake Co, Inc. There was an article written about him in Electric Radio some years ago (electronic index is at listproc@theporch.com, send INDEX BOATANCHORS to get the name). Anyway, it's nice to hear he is alive and kicking!

73,
--Andy
wallace@mc.com

P. S. I couldn't join in on that freq because
I don't have a 5 kW linear and an 80m beam.

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: RSmall01@aol.com
Subject: Johnson Viking II-CDC Carrier Hum...
Message-ID: <960308122642_240894323@emout08.mail.aol.com>

>Good morning (afternoon) everyone!

>

>I have enjoyed being a part of the group for the past several months. This
is

>my first message everyone and am a little embarrassed! I have just
re-acquired

>the station of my youth (57'-59')..a Hammarlund HQ-180 and a Johnson Viking
>II-CDC (the CDC model was factory wired only and is continuous coverage from
>1.7-30 MC-originally approved for Civil Defense operation). Both units are
in

>very excellent condition..

>

>My question to you will reveal with certainty, my lack of technical
>knowledge, a condition I hope to remedy with the passage of time!..Anyway
>this is the situation. I have a carrier hum. I cannot tell if it is 60 or
120

>cycles. With my D-104 connected, the intensity of the hum varies with the
>audio gain knob. With the mic disconnected, the hum remains on the
>carrier...Guys, I have not a clue!..I do know enough however to open the
>cabinet :) and can tell the difference between a power supply, resistor and
>maybe even a capacitor...thats it! except for my ability to solder learned
>while building heathkits..

>

>Can any of you offer some suggestions as to how I might fix the problem? If
>one of you has an operating manual for this unit, reference to a specific
>part(s) #s that may be suspect on the chassis diagram, would be particularly
>helpful to me...Help please! Thanks for listening and your patience..

>

>73' Dick (dues paid member)

>N1WJP

Forwarded message:

From: MAILER-DAEMON@aol.com (Mail Delivery Subsystem)

To: RSmall01@aol.com

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996

From: RSmall01@aol.com
Message-ID: <960308113945_240858349@mail04.mail.aol.com>
Subject: Johnson Viking II-CDC Carrier Hum...

Good morning (afternoon) everyone!

I have enjoyed being a part of the group for the past several months. This is my first message everyone and am a little embarrassed! I have just re-acquired the station of my youth (57'-59')...a Hammarlund HQ-180 and a Johnson Viking II-CDC (the CDC model was factory wired only and is continuous coverage from 1.7-30 MC-originally approved for Civil Defense operation). Both units are in very excellent condition..

My question to you will reveal with certainty, my lack of technical knowledge, a condition I hope to remedy with the passage of time!..Anyway this is the situation. I have a carrier hum. I cannot tell if it is 60 or 120 cycles. With my D-104 connected, the intensity of the hum varies with the audio gain knob. With the mic disconnected, the hum remains on the carrier...Guys, I have not a clue!..I do know enough however to open the cabinet :) and can tell the difference between a power supply, resistor and maybe even a capacitor...thats it! except for my ability to solder learned while building heathkits..

Can any of you offer some suggestions as to how I might fix the problem? If one of you has an operating manual for this unit, reference to a specific part(s) #s that may be suspect on the chassis diagram, would be particularly helpful to me...Help please! Thanks for listening and your patience..

73' Dick (dues paid member)

--LAA26581.826303188/mail04.mail.aol.com--

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: don merz <71333.144@compuserve.com>
Subject: Literature, Control Boxes FS
Message-ID: <960308143116_71333.144_DHB105-1@CompuServe.COM>

Radio Literature and "Stuff" FS

CONTACT: Don Merz, N3RHT: 47 Hazel Drive, Pittsburgh, PA 15228.
412-234-8819 (weekdays, EST or leave a message anytime).
71333.144@compuserve.com

EIMAC Single Sideband brochure/pamphlet: \$9
1950 Walter Ashe catalog: \$14
1964 World Radio Labs catalog: \$12
1947 Burnstein-Applebee catalog: \$15
CQ RTTY Handbook, 1962: \$11

Military BC-366 control box: \$11
Military BC-602 Control Box (f/SCR-522), used: \$11
Military BC-602 Control Box (f/SCR-522) w/matching connector, used: \$15
Military BC-602 Control Box (f/SCR-522), new: \$15

--

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: "Dick Dillman" <ddillman@igc.apc.org>
Subject: London BA Advice
Message-ID: <58738.ddillman@igc.apc.org>

Looks like I'll have a day to myself in London week after next. Can anyone recommend any good BA-relates sites from museums to shops to... well, you know. Thanks.

Dick Dillman
WPE2VT N6VS ex-WA2BJK
<ddillman@igc.apc.org>
Collector of Heavy Metal:
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: "David L. Thompson" <thompson@mindspring.com>
Subject: NC-400 possibilities
Message-ID: <199603081828.NAA27744@borg.mindspring.com>

Army MARS released a large quantity of NC-400's to members in the SE USA willing to act as net control/net managers. Probably true of the rest of the USA too. W5QDC in Jackson, Mississippi had one in 1971..and all of these had National covers. Bet there are NC-400's sitting in shacks gathering dust. Good things come if you look hard enough!

73, Dave K4JRB

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: pbock@melpar.esys.com (Paul H. Bock)
Subject: need manual for EICO 320 signal generator,
Message-ID: <9603082238.AA01734@syseng1.se.melpar.esys.com>

>Does anyone have a manual (or a photocopy thereof) for an EICO model 320
>signal generator? Or if not a manual, perhaps the schematic?

>Jeff Kilgore, KC1MK

I have a 320 at home I bought new, and will be glad to photocopy the manual for you. I'll also send you a copy of the article I published in CQ Magazine back around 1970 on how to improve stability; it includes electrical mods (i.e., voltage regulator) and mechanical mods including stiffening the chassis & FP and adding a tuning vernier.

73,

Paul, K4MSG

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: kilgore@dev.tivoli.com (Jeff Kilgore)
Subject: need manual for EICO 320 signal generator, etc.
Message-ID: <9603082139.AA03973@wichita.tivoli.com>

Does anyone have a manual (or a photocopy thereof) for an EICO model 320 signal generator? Or if not a manual, perhaps the schematic?

Also, does anyone have any recommendations for a good, reasonably priced (under \$500) frequency counter, preferably one with coverage from audio up to 1.3 GHz?

Thanks,
Jeff Kilgore, KC1MK

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: rsolomon@cctds.textron.com
Subject: Old Manuals,, What's Left
Message-ID: <9602088263.AA826324917@cctds.textron.com>

Got a great response, Tnx to all who inquired. Now to summarize what's left.

ALL ORIGINALS

Hallicrafters SX-146 Manual	\$15
Hallicrafters SR-34/34AC Manual	\$13
AN/USM-50 Oscilloscope (TM 11-5129)	\$15
Tektronix Manuals	
Type D Plug-in	\$12
Type CA Plug-in	\$15
Type 1L20 (Spectrum Analyzer Plug-in)	\$25
Model 585 Oscilloscope	\$20
Model 503 Oscilloscope	\$15
Hewlett Packard 608C Sig Gen	\$20
Bird 43 Wattmeter (Small version)	\$14
KAAR TR-426 Mobile Telephone	\$16

Copies (20+ years old) Money back guarantee

CV-591A/URR SSB Converter	\$20
Hammarlund HQ-170 Receiver	\$16
URM-81 Frequency Meter	\$18

That's all for now, e-mail to rsolomon@cctds.textron.com

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: tomrice@netcom.com (Tom R. Rice)
Subject: packing suggestion
Message-ID: <199603081839.KAA02650@netcom7.netcom.com>

Having committed to ship a valuable piece of radio gear, I checked out the usual packing houses, but was put off by high prices. The solution: I was able to buy, for the princely sum of \$40.00, a 125-foot roll of 1-inch bubble wrap 48 inches wide, slit (at no extra cost) into 12- and 24-inch widths. This was through a local packing-supply wholesaler. Now I have enough material to ship stuff for the next six years at less than the cost of one "professional" packing job.

Just a suggestion.....

73 de WB6BYH

--

"Start off every day with a smile and get it over with." --W.C.Fields
Tom R. Rice

tomrice@netcom.com
CIS: 71160,1122

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: tomrice@netcom.com (Tom R. Rice)
Subject: Paco VTVM manual sought
Message-ID: <199603081829.KAA01200@netcom7.netcom.com>

T'other day I picked up a 9/10 condx Paco V-70 VTVM for \$9.95. Took it home and, after sniff inspection, plugged it in. Works fine, even the selenium rectifier's good. It's missing the input lead and probe, so I expect to build one. It would be nice to have a copy of the manual, so if someone in BA-land can supply same.....?

The usual cost-support offers apply.

tnx, WB6BYH

--

"Start off every day with a smile and get it over with." --W.C.Fields
Tom R. Rice
tomrice@netcom.com
CIS: 71160,1122

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: BOBFABRIS@delphi.com
Subject: QST FS
Message-ID: <01I22SAPVR3695NBDW@delphi.com>

Two years of QST for sale - 1959 and 1966. Any offers? Email me at zbob.@ix.netcom.com. TIA

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: FRANCIS4@AppleLink.Apple.COM (Francis, Dexter)
Subject: Quality...
Message-ID: <826321100.3759674@AppleLink.Apple.COM>

I'm sorry, but I just can't let this "quality was better in the XX's" thing go by without a comment. I've been taking apart, designing and building mechanical, analog and digital electric things since I could grab a screwdriver. (Age 5!) In all the years I've done it I've NEVER thought or had it suggested that obsolescence be planned into the design. More often than not it's been the opposite; I've been worried that what I design today won't perform as well or as fast as what I could ship if I waited another 6 months to release the product into production because

our buyers always want the newest, fastest, system...for free!

Every component in a system is being changed by the manufacturer to improve performance or reduce costs, or both, constantly. Even the humble machine screw has been changed over the years. The quality of a system is directly related to the quality of the components in it. If the buyer isn't demanding it, the OEM vendor is doing it to try and lower *his* costs. The chip resistor made today has been tweaked and prodded and poked to be cheaper (while hopefully just as reliable) as the bigger discrete ones produced 20 years ago. Changes in materials have brought improvements in performance or reduction in costs or both.

The 60's *were* the end of an era. Vacuum tubes were going out and more efficient silicon parts were coming in, BUT there were just as many chances to put marginal components in a tube design then as there are in a solid state one now. The biggest difference I see is that today all the resistors and transistors are so small, and bundled together so tightly, that you can't even see them. This makes it impossible to just replace a single component, but when you can make 1000 for what you used to pay to get just one, it's not as big a deal. I can buy an entire FM receiver on a chip for what I used to pay for just a capacitor and one tube. Is this planned obsolescence? I don't think so, any more than going to college is planned obsolescence of going to elementary school.

If you momentarily ignore the "art" of BA's and just consider the function of radio, we've come a long way. I suspect there is an art to good IC design and layout. Unfortunatley we can't see it, so we can't appreciate it. However, that doesn't mean it isn't there, and just as much of an influence on the reliability and functionality as good design was in radios with discrete parts, with or without heaters. By the same token, the same problems that existed in large discrete parts also exist in micro-electronics, only on a smaller scale.

A good design is produced by good designers, using good parts, who care about function and performance and cost. That was true in 1930 and still is today. You use the best technology (parts) available that you can afford. (Unless you are NASA or the military, in which case you use the best parts the taxpayer can afford...)

It doesn't matter if they make nails or microwave diodes or croissants. In every area there are hacks and masters. Hopefully we're trending toward mastery rather than the other way.

Sorry for the tirade. Now back to your regularly scheduled program...

-df (NOYLJ in Colorado Springs, CO.)

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: john <johnmb@nando.net>
Subject: Quality...
Message-ID: <9603082328.AA01050@nando.net.nando.net>

) In all the years I've done it I've NEVER
>thought or had it suggested that obsolesence be planned into the design.

Hmmmmhhh... as an engineer, I'd like to agree, but 14 years experience
in the computer industry showed me otherwise... quite frustratingly.
When design cycles and product lifetimes squeezed down to a number of years,
I saw MANY decisions made about product quality made with the useful (short)
lifetime of the product in mind. These were NOT knock off PC's either.

I'm not sure whether this applied in the BA age or not, but I
suspect as long as there has been engineers, there have been marketing
people and accountants as well!

TGIF
/john

John Brewer johnmb@nando.net
WB50AU/4 AMI #24
Vintage Gear web page: <http://www.zynet.com/~johnb>

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
Subject: R-100 manuals?
Message-ID: <9603080743.aa09931@IMAGE.ARL.MIL>

With all of the recent talk about the Knightkit R-100 now might
be a good time to ask. Does anyone have or know where to get
service manuals/info for this receiver?

Thanx,
Andy

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: R390A Thanks and filters

Message-ID: <01BB0CE6.ABF9B220@juneau_20.dialups.ptialaska.net>

Hello URR folks-

Mike asked about 6kc. filters a few days ago (our e-mail goes bulk on the barge so sorry for these untimely responses BLTN.

Just got the latest Digi-Key catalog today (1-800-DIGI-KEY)

<http://www.digikey.com>

See p.192 for the Toko ceramic filters available in 4,6,8,10,12 kc.bw

these are 18db down @9kc Not quite a mech, but @ \$2.65 each whatdahey!

Available only in 455kc.

Good write-ups in Electric Radio 52 and 57

Other GlowInTheDark Goodies in D-K:

Panasonic caps, Electrolytic and polyester

Carbon film resistor kits (Yes 75A4s can be used as radios as well as conversation pieces)

CTS speakers (real American iron-probably NOS)

Switchcraft .206 (Drake, Collins) mic plugs p.69 E.F. Johnson lives!(p.70-71)

Cinch connectors (12 pin \$5)p.57

To Dennis McLaughlin and Herb Holeman (WL7BIL) mucho tnx for assistance on my 390A band 0-8 problem. Cannot say for sure which

remedy brought Motie back to life, but Deoxiting

the function switch, MC contacts S-208, along with swinging T207 to other side of peak collectively did the trick.

Jim Dillon WL7CMQ beadgal@ptialaska.net

Still Seeking NC-100X, ACR-111, SX-11, other Green Eyed Thirtiessomething Ladies

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996

From: AJXLSC@tevm2.nsc.com

Subject: Radios In The Milwaukee Area

Message-ID: <9603081849.AA13204@nsc.nsc.com>

FROM: Jim Lyle

SUBJECT: Radios In The Milwaukee Area

Hello;

Through a strange twist of fate I'm going to find myself in Milwaukee, WI tomorrow. Does anyone know if there are any good radio stores or museums or other things I should make a point of visiting?

I do know there's a WONDERFUL bookstore there. Last time I was in town, I bought and shipped home a CASE of old radio/electronics books, and I left a lot more behind (for this trip! <grin>).

Please don't reply to this email address (which I won't be able to check

again before I leave). Reply to the boatanchors list, or to my personal email address

Jim Lyle -- jlyle@netcom.com

P.S. I'm sending in my \$12.00.

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Recipe for a Slop Jar Rectifier (:+}}.....
Message-ID: <9603081439.AA103319@csemail.cropsci.ncsu.edu>

>
> I'm about one generation too young to know anything about slop-jar
> rectifiers, but I enjoyed reading about them in W8JK's autobiography "Big
> Ear" by John Kraus. Even my father-in-law, KL7W, was unable to come up
> with a recipe for making one, but I'm confident that someone out there in
> BA cyberspace can give all of us old timer wannabe's directions for
> building a demonstration slop-jar rectifier.
>
> What I'd like to build here is a single slop jar rectifier connected to a
> lightly fused variac, a small light bulb as a dc load, and then torch the
> thing off at the next ham club meeting. I understand that they emit a glow
> of colored light during normal operation--can anyone confirm this? So how
> do I build a demonstration slop jar rectifier, and how much voltage can I
> safely apply to it and how much current can be drawn? Any experts out
> there in netland, or anyone with any good books on the subject? Enquiring
> minds want to know.....
>
> Herb Holeman, WL7BIL
> Juneau, Alaska
> choleman@ptialaska.net

Herb, et al.....

Boatanchor Bob's Recipe for a Glowbuggin' Slop Jar Rectificus Sooperdoooperus

1. The principle upon which a slop jar rectifier works is one of electrolytic decomposition of dissimilar metals in an oxygen rich solution. (I am sure that others can give a more precise molecular chemical reaction system for the process, so I won't bother with that here.)
2. The dissimilar metals of the electrodes are, typically, lead and aluminum. They are sized at 1 square inch of reactive surface for each 40 ma of

current drawn through the rectifier. DO NOT EXCEED THIS RATING.

3. Each rectifier is rated at a maximum of 50 working volts. DO NOT EXCEED THIS RATING.
4. The electrolyte solution is a saturated aqueous solution of common washing borax or ammonium phosphate.
5. The electrodes are long metal strips hung over the edge of glass tumblers or glass canning jars, although commercial versions were made with fancy glass jars and tops. An ordinary jelly glass works well, although the larger volume of a canning jar will keep the solutions cooler.
6. Once the electrodes have been placed in the jars and the jars filled to about 1 inch from the top with electrolyte, a 1/4 inch layer of a light grade of oil is poured atop the electrolyte solution to minimize evaporation under heating, and to minimize electrolyte creepage.
7. The electrodes can be fitted to plastic or hard rubber tops to keep them in position, if desired, although just bending the electrodes to fit the lip of the jar is sufficient.
8. Once poured, the electrodes need to be ``formed'' by electrolytic decomposition of the metals. This is done by passing a current through the rectifiers, limited by a series resistance to a MAXIMUM of a few milliamperes of current, into a load. Traditionally, two or three 110 volt lamps were used as series resistances to limit the current during forming. Forming takes approximately 6 hours. Aluminum hydroxide forms on the aluminum plate, and the lead plate turns a redish color (I am not sure of the chemical state of the lead).
9. Because heat is generated in the operation of the system, a string of several rectifiers is typically used, and they are often set into wooden trays to hold them in place. Usual ham rigs running a 5 watter at 500 volts would have had a string of at least 10 rectifier jars in each leg of a full wave rectifier. Using a 50 watter at 1000 volts would require 20 jars in each string.
10. If the cells are run at too high ratings (greater than 50 volts per cell or 40 ma per square inch of electrode surface), they can break down and the solution will get quite hot or boil. Hence, BE VERY CAREFUL when working around these rectifiers, and make sure you have sufficient electrolyte to dissipate the heat generated, and sufficient numbers of cells for the voltage to be rectified.
11. Follow the rectifier system with appropriate filters to give a pure dc continuous wave note.

Good Luck
73/ZUT DE NA4G/Bob

ref: Loomis, M.T. 1925. Radio theory and operating. Washington, D.C.,
Loomis Publishing Company, 848pp. (See section 327, pages 368-370.)

```
*****
* 73/ZUT TU/SU VA DE NA4G      ``Boat Anchor Bob'', an ol' CW fart.  *
*****
* Morse has been in the family for over 100 years.                      *
* Morse radiotelegraphy (Spark/CW) has been in the family since 1914.  *
*****
* May you have fair winds and following seas on your watch at the key. *
*****
```

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Arthur Moe <kb7ww@aracnet.com>
Subject: Re: Recipe for a Slop Jar Rectifier (:+}}.....
Message-ID: <199603081605.IAA26987@trapdoor.aracnet.com>

Is this not worth the \$12.00 ????????

TKS Bob

73s
art

```
>
>*****
>Boatanchor Bob's Recipe for a Glowbuggin' Slop Jar Rectificus Sooperdoooperus
>*****
>
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```

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>
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> wooden trays to hold them in place. Usual ham rigs running a 5 watt
> at 500 volts would have had a string of at least 10 rectifier jars
> in each leg of a full wave rectifier. Using a 50 watt at 1000 volts
> would require 20 jars in each string.
>
>10. If the cells are run at too high ratings (greater than 50 volts per
> cell or 40 ma per square inch of electrode surface), they can break
> down and the solution will get quite hot or boil. Hence, BE VERY
> CAREFUL when working around these rectifiers, and make sure you have
> sufficient electrolyte to dissipate the heat generated, and sufficient
> numbers of cells for the voltage to be rectified.
>
>11. Follow the rectifier system with appropriate filters to give a pure
> dc continuous wave note.
>
>Good Luck
>73/ZUT DE NA4G/Bob
>
>ref: Loomis, M.T. 1925. Radio theory and operating. Washington, D.C.,
> Loomis Publishing Company, 848pp. (See section 327, pages 368-370.)
>

>
>*****
>* 73/ZUT TU/SU VA DE NA4G ``Boat Anchor Bob'', an ol' CW fart. *
>*****
>* Morse has been in the family for over 100 years. *
>* Morse radiotelegraphy (Spark/CW) has been in the family since 1914. *
>*****
>* May you have fair winds and following seas on your watch at the key. *
>*****
>
>

AT THE END OF THE OREGON TRAIL

Arthur Moe
A.R.S. KB7WW
QTH: Oregon City, Or.

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: Sandra L Knepper <slkst29+@pitt.edu>
Subject: Re: Repairing Clock Motors
Message-ID: <Pine.3.89.9603080651.A1643-01000000@unixs1.cis.pitt.edu>

My grandfather repaired clocks many years ago and his lubricant of choice was kerosene. He would soak the clock overnight and then drain dry. I, too, think that kerosene is at least an alternative worth considering even when cleaning cars. I place a cup of kerosene in a bucket of hot sudsy water to remove winter's grime.

Dave, W3BJZ
Publisher of the monthly Collins Journal

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: K4JYH@aol.com
Subject: Ryder manuals
Message-ID: <960308093012_344915893@mail06.mail.aol.com>

I have Ryder manuals vols 1 thru 6 in real nice condition. Also have Atwater Kent brown leather bound manuals. The Atwater Kent manuals are service manuals and parts list for many of their radios. Dates of the Atwater Kent manuals are June 1931.
My question is does anyone out there know the value of these manuals?

There is a fellow in a neighboring town that found out that I had them and he wants the Ryder manual no#4. I wonder if it would hurt to break up the set of 1 thru 6?

Thanks Tom lemar
k4jyh@aol.com

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: "Terry O'Laughlin, RM:7135, #:6-6667" <OLAUGHLIN@vilas.uwex.edu>
Subject: Scrounging source for 6ES8s
Message-ID: <MAILQUEUE-101.960308133156.320@vilas.uwex.edu>

> There aren't many variable-mu TRIodes out there (I hope someone will
> prove me wrong) for building cascodes or grounded-grid VHF preamps,
> so it's good that the 6ES8 exists. However, I heard that they are
> pretty rare nowadays.

I have culled a number of 6ES8s from old Jerrold CATV amps. Their big VHF line amp had a pair in each. These units can be had for the hauling in many places. There isn't much demand for vacuum tube CATV equipment these days.

73 Terry O' WB9GVB

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: rbiddle@madvax.mo.ti.com (Richard Biddle)
Subject: Subscription vs competition
Message-ID: <9603081817.AA27330@MadVax.mo.ti.com>

I have also held back but I think I'm now getting ticked. I see "So and so would only cost \$1.50/year for each user." and "We can make a Usenet newsgroup with a moderator to do it." I can tell you folks one thing, I sure would not take on the job of trying to moderate a mess like a rec.radio group. It would be a full time job for a staff of ten. And a non-moderated group isn't worth it in most cases. I work in a company where we make a profit (most of the time). I'm sure our customers would like to buy what we sell for our material cost and not pay anything to take care of things like overhead, R&D, and future expansion.

When boatanchors got bumped from the old host, NO ONE would take on hosting it. We now have something that works. I don't give a hoot that there may be some leftover money in the kitty at the end of the year. It may just be enough to cover replacing the hard drive when (not if) it crashes. And it really doesn't bother me that we have a crusty O.F. as the list keeper.

Bottom line - it's worth the 3.3 cents per day to me to have access to the expertise on the list even if I was just a full time lurker.

We will all have to adapt to a changing Internet - I'm on the team that's putting the WWW page together for our division. We believe that the net is a good place to provide a service to our customer, but what we sell isn't the web page. As more and more users get on-line, there will be more and more pay-for-service items on the net. Each of us will have to decide if those services are worth the money. Boatanchors is. Time will tell if it is being done in the right manner, but I'm sure Jack will adjust the rules as needed to meet the needs of the users and to attract new blood.

Okay, I got it off my chest. I promise to be a good camper now and never ever post anything like this again. And since I'm on digest format there may be a message already out telling me not to post this. If so I apologize in advance.

And if you doubt the future of the net, see my sig.

73 de Richard, KB5WLH	<< The Internet - CB Radio >>
rbiddle@madvax.mo.ti.com	<< For The Nineties >>

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: dma@IslandNet.com (Jan Skirrow)
Subject: Re: Tektronix and Selenium Rectifiers
Message-ID: <m0tv7AI-000FiVC@island.amtsgi.bc.ca>

>My experience with seleniums is that when they fail, their voltage drop just
>goes up. The can (rarely) catch fire and the smoke is bad for you, but it
>stinks like hell-rather like H2S-so you won't be tempted to breathe much of
>it.

The only time I've seen selenium rectifiers fail disastrously was when the B+ was shorted - usually in cheaply made AC-DC televisions of a certain vintage, and then usually due to a bad electrolytic. The current surge usually took the selenium rectifier out with the legendary puff of evil smelling smoke. I wouldn't liken it to H2S, but it sure is unforgettable. I've never seen one catch on fire - thank goodness.

The more common failure mode is as suggested - the internal resistance rises. I recently revived a hallicrafters TW-1000 (their version of the Zenith T0). It would work for the first 5-10 minutes and then stop. The problem was the selenium rectifier. I guess a bit of internal heating was enough to raise the internal resistance enough to cut the B+ below the point at which the circuit would operate. Replacing it with a 1N something solved the problem.

The excess voltage drop wasn't a lot - maybe 10% below nominal. But for some reason the TW1000 is very sensitive to the B+ level - whether by design or as yet undiscovered problem I don't know.

Jan Skirrow, VE7DJX
dma@islandnet.com

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: w7ni@teleport.com (Stan Griffiths)
Subject: Re: The Flickering Candle of Quality
Message-ID: <199603080500.VAA28055@desiree.teleport.com>

>What we lost in the 60s or so was the design and manufacture of
>electronics of such extraordinary quality that they survive 50 years
>later. We have lost electronics which can be repaired by the sharp,
>neighborhood technician. (The manufacturers systematically eliminated
>these, BTW, knowing full well what they were doing.) We have lost the
>ability for a small business which emphasizes quality products and
>services to compete realistically and without compromise with
>multinational corporations which emphasize the bottom line.

Boy, this shows up in spades in Tektronix instruments of the '60s which are very serviceable and will be operating for 2 decades beyond those built in the '70s and '80s. Beyond about 2010, you won't see many operating Tek scopes built in the '70s or '80s. You will STILL see many operating scopes built in the '60s, however, when quality was at its peak and planned obsolescence was an idea that had not yet matured into reality. Tek scopes of the '60s are, BY FAR, my favorites.

Stan w7ni@teleport.com

From boatanchors@theporch.com Fri Mar 8 18:13:31 1996
From: Radiomatt@aol.com
Subject: using tubes in receivers
Message-ID: <960308145535_345220579@mail06.mail.aol.com>

I was going over some lit on the Siemens receiver I have. The 445E311 has 16 tubes, but only 3 types! Sure saves on spares inventory!
It shows that engineers can get around the advantages/shortcomings of those hollow-state devices.

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996

From: merrigan@ee.ualberta.ca
Subject: Re: What's the Best Tube Tester?
Message-ID: <199603080535.XAA07521@uro.theporch.com>

In <Chameleon.960305151317.cfb@>, on 03/05/96 at 04:14 PM,
cfb@novum.com said:

>I've decided it's time to buy a good tube tester.

I have a Hickok 6000A (red leatherette case and all) which has given me good service. Also got a boatload of supplementary tube data (for "old, obsolete, european, foreign" tubes) without which any tube tester is not much good. The roll charts on the test cover maybe 60% of the tubes I test. For the others, I have needed the supplementary data, which was (still is??) available from Puett. These are copies of Hickok data sheets circa late 1960's.

Shaun

--

merrigan@nyquist.ee.ualberta.ca
Shaun P. Merrigan
Electrical Engineering Student
University of Alberta
Edmonton, Alberta

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: garland@MPS.OHIO-STATE.EDU (James C. Garland)
Subject: WTB: Collins S-line spinner knob, 516F-2
Message-ID: <01I239YSDN488WWS74@MPS.OHIO-STATE.EDU>

Hi folks,
I'm looking for a spinner (main tuning) knob for an S-line, either with (preferred) or without the finger hole. Also, I'd like to find a clean 516F-2 power supply. Pse call ((614) 548-7277 or email. Thanks.

Jim W8ZR

From boatanchors@theporch.com Fri Mar 8 12:24:08 1996
From: "Integration Area" <integrat@usr.com>
Subject: WTB: Pre-WW2 Navy Tubes

Message-ID: <9602088263.AA826304326@robogate.usr.com>

I am looking for older Navy tubes with class-38 numbers. These tubes generally have the two or three letter manufacturers code followed by a five digit Navy type number. This type number sometimes reflects the original number of the tube. For example:

CRV-38047 = RCA 47	CRV-38803 = RCA 803
CG-38111 = GE 211	CWL-38160 = Westinghouse 860

Of these old type numbers, I need CRV-38027s (RCA 27s) the most. I have a diversity mixer that needs nine of them.

If anyone has any even older Navy tubes - pre-1932 four digit numbers - I would be interested as well.

William Donzelli
integrat@usr.com